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Army-Navy Orders
Utilize Almost All
C.P.T. Facilities

Orders for tens of thousands of civilian pilot training courses have been received by the Civil Aeronautics Administration from the Army and Navy Departments within the last few months, bringing the total number of courses contracted for to over 110,000 and resulting in almost complete utilization of existing C. P. T. facilities, according to William A. M. Burden, Special Aviation Assistant to the Secretary of Commerce.

The new quotas completely fill the capacity of the advanced training courses and come near to filling the immediate capacity for elementary courses. While the operators have enough aircraft to take on another 20,000 elementary courses, this cannot be done until the necessary instructors can be trained. The elementary course, however, covers only a preliminary part of a pilot's training. Many Army and Navy trainees take as many as four or five C. P. T. courses before going to active duty.

On War Footing

He also pointed out that all persons now being trained by the C. A. A. are either Army or Navy enlisted reservists, thereby putting the training program on a complete war footing.

While it is true that in addition there are a large number of existing light airplanes of the type suitable for elementary training, which could be purchased by C. P. T. operators, according to Mr. Burden's statement, it will be necessary to train several thousand instructors before these ships can be used.

The C. A. A. is training pilots in five categories requested by the armed forces.

(See Army-Navy, page 180)

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Simpler Air Regulations
Being Devised By C.A.A., C.A.B.

The Civil Air Regulations are being streamlined to facilitate war and post-war civilian flying according to Charles I. Stanton, Administrator of Civil Aeronautics.

"Although he is now burdened with new regulations made necessary by war-time conditions," Mr. Stanton said recently, "the private pilot, along with other airmen, can take consolation in the fact that recent progress toward simplification of the C. A. R. will save many hours of time formerly spent doing business with Civil Aeronautics Administration inspectors. Members of the Civil Aeronautics Board have shown that they are anxious to continue this process and the C. A. A. plans to put before them as rapidly as possible further suggestions for simplifying the regulations."

Reports Made
On C. A. A. Research
In Communications

Two Technical Development Reports, Nos. 28 and 29, dealing with research in the field of aviation communications have recently been issued by the Civil Aeronautics Administration.

Report No. 28 proposes a system for allocating range frequencies in the ultra-high-frequency bands so as to allow for inexpensive and more orderly expansion in the post-war period. It is entitled "National Allocation Plan for Assigning Radio Range Frequencies in the Band 119-126 Megacycles."

The allocation plan has been developed around the use of ultra-high-frequency

(See Research, page 186)

Minimum of Rules

By and large, Mr. Stanton believes, airmen recognize and accept their responsibilities, and need only a minimum set of common-sense regulations as guideposts.

With this in mind, the C. A. A., which is charged with enforcing the regulations, had begun work before Pearl Harbor on a series of proposals for simplification. A number of these have already been adopted by the Civil Aeronautics Board, which is charged by law with drawing up the regulations C. A. A. enforces, and which, appropriately, looks to those who deal with enforcement of the regulations for suggestions as to their improvement.

C. A. B. Pushes Streamlining

"The Board sits in judgment on what has become the Nation's third greatest industry, and is anxious to keep its regulations as streamlined as the airplane itself," Mr. Stanton stated.

Probably the outstanding recent change is the establishment of permanent airmen certificates, eliminating the requirement of periodic endorsement by C. A. A. inspectors. Heretofore, every pilot, mechanic, dispatcher, control tower operator, and instructor had to find out annually when a C. A. A. inspector would be in the vicinity, perhaps make a trip to another town to see him, possibly find that the inspector had been delayed by a heavy schedule, come back the next day, wait his turn, and finally get a chance to show the inspector his log book and prove that he had had the necessary amount of appropriate experience during the preceding 12 months.

(See Regulations, page 180)



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New Type Approvals

(Approved numbers and dates of assignment in parenthesis)

Type Certificates

Gliders

Taylorcraft, ST-100 (Army TG-6), 3 place land monoplane, Class II. (Type Certificate No. 11, 9-3-42.)

Propellers

G. B. Lewis Company, L10 and L11, wood, 6 ft. 0 in. diameter, 3 ft. 10 in. to 3 ft. 2 in. pitch; Model L10; 65 h. p., 2,300 r. p. m.; Model L11; 65 h. p., 2,350 r. p. m. (Type Certificate No. 798, 9-9-42.)

Women Show Skill, Labor Survey Says

A large proportion of women in aircraft production can be upgraded through training to fill positions requiring high degrees of skill and responsibility, according to a recent statement by Secretary of Labor Frances Perkins.

Secretary Perkins' statement was based on results of a Nation-wide survey by the Labor Department's Women's Bureau, in response to requests from aircraft plants for information on employment standards and jobs for women.

Women in Many Jobs

"Women work on most of the manufacturing processes that go into the fabrication and assembly of an airplane," the survey said. The study also presented figures which estimated that 250,000 women will be in the aircraft industry by the end of this year as compared to some 2,000 working in assembly plants late in 1941, and it stated that women are entering most of the plants on the same pay scale as men, the most usual rate being 60 cents an hour.

Opinions Available

The following Civil Aeronautics Board Opinions of volume 3 are now available in printed form as advance sheets prior to their inclusion in a bound volume:

Opinion No. 37, CONTINENTAL AIR LINES, INC.—Mail Rates for Routes Nos. 29 and 43; Docket No. 670.

Opinion No. 39, BRANIFF AIRWAYS, INC., ET AL.—Automatic Rate Adjustment; Docket No. 1-406(A)-1.

Opinion No. 40, DELTA AIR CORPORATION.—Mail Rates for Routes Nos. 24 and 54; Docket No. 331.

Copies may be obtained from the Superintendent of Documents, Government Printing Office, Washington, D. C., for 5 cents each. When ordering, include the opinion serial number and the docket number as well as the opinion title.

New Models Added to Old Type Approvals

(Approval numbers and dates of approval of new models in parenthesis)

Aircraft

Meyers, OTW-KK, 2 place open land biplane. Engine, Rearwin Ken Royce 7F or 7G. (Type Certificate No. 736, 8-25-42.)
Rearwin, 190F, 2 place closed land monoplane. Engine, Franklin 4AC-199-E3. (Type Certificate No. 729, 9-1-42.)

Propellers

Hartzell, C-778, wood, 6 ft. 8 in. diameter, 5 ft. 8 in. pitch, 145 h. p., 2,050 r. p. m. (Approved Type Certificate No. 655, 9-15-42.)
Sensenich, S3AA, wood, 6 ft. 11 in. diameter, 5 ft. 7 in. to 4 ft. 10 in. pitch, 185 h. p., 2,550 r. p. m. (Approved Type Certificate No. 586, 9-22-42.)

Aircraft

Aeronca, 058B (Army L-3B), 2 place closed land monoplane. Engine, Continental A-65-8. (Type Certificate No. 751, 9-4-42.)

Latin-American Pilot Trainees Pass C. A. A. Tests

Almost 200 men have completed courses leading up to instructors' certificates under the training program being offered Latin Americans by the Civil Aeronautics Administration. First of the 200 to pass his examinations was Guillermo Consuegra, Bogota, Colombia, who earned his commercial and instructor's certificate last month.

About 75 Latin-Americans being trained under C. A. A. supervision as airplane service mechanics have already completed the course they were originally scheduled to receive, and a majority have accepted an offer of a 6 week "post graduate" course in some specialty—aircraft, engines, accessories, instruments, radio, or drafting. Ten trainees at Curtiss-Wright Technical Institute, Glendale, Calif., have completed the course in accessories.

More Trainees Coming

Still in training are 89 Latin-Americans, whose course as instructor mechanics is scheduled to run approximately another year, 15 administrative aeronautical engineers, due to continue their studies for about 16 months, and 55 being trained as pilots by the United States Army.

Plans are being worked out but have not yet been completed to bring additional Latin-American trainees to this country. A C. A. A. representative, Olin Haley, is now in Mexico to supervise the establishment of two pilot training schools, modeled after those operated in the United States under C. A. A. supervision. Mexican young men now completing the C. A. A. pilot training course are expected to form the nucleus of the teaching staffs. Training planes are being supplied under the Lend-Lease program.

Largely as a result of the C. A. A. training program, reciprocal agreements for issuance of commercial pilot certificates have been concluded with most of the American Republics. Under arrangements made through the State Department, the C. A. A. will issue such a certificate to any qualified citizen of a republic which extends similar privileges to citizens of the United States.

Old Tires Still Good

Airplane tires found in the sea near Pearl Harbor and believed to have been immersed for almost 15 years, still contained air when brought to the surface. Efforts are being made to identify the plane of which they were once a part by checking the serial numbers on the barnacle-encrusted tires.



Low-Grade Fuel Poor Engine Food

Following is the text of a bulletin issued by the Safety Bureau of the Civil Aeronautics Board:

HORSE-POWER DIET

Proper fodder is as important for engines as it is for horses. Bran mixed with sawdust will not produce the same horse power as straight bran. The use of low-grade fuel in aviation engines is comparable to sawdust in bran for horses. We receive at present far too many reports of power-plant failures caused by fuel of lower grade or other than the quality specified by the engine manufacturer.

This would be serious and hardly sensible at any time but at present with the Nation at war, the action of using an unspecified fuel is unpatriotic and extremely foolhardy. The chances of replacing your airplane or parts of it under present conditions are meager. Consider also, the impossibility of cancelling a serious or fatal personal injury with a check book.

The difficulties experienced in using automotive gasoline are well known—cracked piston and cylinder heads, rings and valves sticking, poor idling characteristics. The higher operating temperatures of aircraft engines appear to accelerate the formations of gum and carbon, thereby affecting the functioning of rings, valves, and plugs.

The technical differences between the characteristics of aviation and automotive gasoline will not be discussed here. It should be sufficient to point out that an operator using such fuels must accept full responsibility for doing so and the action amounts to practically willful damage to aviation equipment that might be useful in the war effort. This, of course, is a reprehensible act.

"TREAT 'EM RIGHT!"
and
"KEEP 'EM FLYING!"

runway, the power was cut. This allowed the aircraft to settle in, striking some tree stumps adjacent to the end of the runway, damaging the tail surfaces sufficiently to necessitate repairs at Barranquilla. Weather conditions were good and had no bearing on the accident.

Probable cause.—Failure of the pilot to avoid low obstructions near the end of the runway.

(See Accidents, p. 184)

First Bomber Wood

America's first bombing plane, built in 1918, was comprised largely of wood and airplane linen, carried a crew of five who rode out in the open, and traveled at about one-third the speed of a modern combat plane.

Accident Ratio Drops 25 Percent in 1941

A reduction of approximately 25 percent in the accident ratio during 1941, as compared with 1940, and a reduction in the ratio of fatal accidents for the same period of 50 percent, is reported in an annual summary of nonair carrier accidents just released by the Safety Bureau of the Civil Aeronautics Board.

The summary, entitled "A Statistical Analysis of Non-Air Carrier Accidents, Calendar Year 1941," states that although there was an increase in 1941 of 68,000 fliers, students and pilots, there were only 781 more reported accidents.

The summary is available upon request at the Correspondence Section, Civil Aeronautics Administration.

August Accidents Drop

Twelve fatal accidents were reported to the Safety Bureau of the Civil Aeronautics Board for the month of August 1942. All of these accidents occurred in non-air carrier flying.

There were three spin accidents, one of which occurred while crop dusting. There were two collisions in full flight. One of these was collision with wires while crop dusting. One was collision with other aircraft.

In the seven other cases, the investigator's reports have not yet been received.

A table comparing the fatal accidents in July and August, 1941 and 1942, follows:

	Non-air carrier	Air carrier		Total
		Domestic	Foreign	
August 1942.....	12	-----	-----	12
August 1941.....	17	-----	-----	17
July 1942.....	14	-----	-----	41
July 1941.....	36	-----	-----	36

¹ Two reports were received after the release of information on July fatal accidents.

Mars Supercharged

The entire flight deck and a large portion of the main deck of the Glenn L. Martin Mars, world's largest flying boat, is supercharged, permitting normal breathing miles above the earth without oxygen masks or tubes. The entire crew of the Mars also enjoys the benefits of modern air conditioning regardless of how high the plane may penetrate into the frigid atmosphere far above the earth.

SELECTED ACCIDENT REPORTS

Aerial Clowning Fatal To Pilot, Passengers

Joseph A. Benjamin and his two passengers, Howard Schultz and Harold Massie, were fatally injured in an accident which occurred approximately 3 miles west-southwest of Kankakee Airport, Kankakee, Ill., on May 25, 1942. Benjamin held a private pilot certificate with a rating to fly single-engine land-planes of 135 h. p. or less. He had a total flying time of approximately 166 hours. The aircraft, a Travelair, model 2000 B, was completely demolished by the crash and subsequent fire.

Benjamin and his passengers took off for a local pleasure flight. Shortly afterwards the aircraft was observed circling farm houses near the scene of the accident at an altitude described as very low. The pilot then headed south and performed a maneuver which one witness, unfamiliar with flying, described as a loop. Following this, the ship was observed to spin and strike the ground nose-first at an angle of about 60°. The plane caught fire immediately after impact.

Investigation disclosed no evidence of failure of the aircraft or any of its components. The condition of the propeller indicated that little power was being developed at the time of impact.

Probable cause.—Failure of pilot to maintain control during acrobatics at low altitude.

Contributing factor.—Recklessness of pilot.

Stumps at Runway End Damage Airliner

An air carrier accident which resulted in minor damage to a Douglas airplane, model DC-3A, owned and operated by Pan American Airways, Inc., occurred on July 16, 1941, at Soledad Airport, Barranquilla, Colombia, South America. No injuries were sustained by any of the 15 passengers or the crew of 4. The crew consisted of Capt. Victor Albert Wright and Copilot Bruce Sloat Meade, Jr., both of whom were properly certificated and appropriately rated, John L. Cunningham, radio officer, and Charles Hinton Gay, flight steward.

The flight originated at Port of Spain, Trinidad, with Brownsville, Tex., as its destination. Several intermediate stops were scheduled, including one at Barranquilla. The flight proceeded without incident until the landing at this point. A low, power-on approach was made and just prior to reaching the



P. A. A. Mail Pay Reduced To Reflect Normal Profit

The Civil Aeronautics Board has announced a reduction in mail rates payable to Pan American Airways, Inc., over that carrier's Latin-American divisions and has fixed new rates payable to that company over its trans-Pacific routes in operation prior to Pearl Harbor.

Considering the need of the carrier's Latin American routes as a unit instead of separately, the Board ordered a rate of 17.83 cents per revenue mile, effective September 1, 1942. The 1941 rate for these combined routes was 81.99 cents per revenue mile and resulted in Pan American receiving approximately \$6,910,000 during that year.

Excess Profits

Under the new Latin-American rates the Board estimates that Pan American will receive \$1,771,000 for mail for the year beginning September 1. In the future, the carrier will receive payment directly from foreign governments for the transportation of foreign mail on these routes, which should amount to an estimated \$1,773,000, so that the total cut in mail pay will be approximately \$3,368,000.

The Board pointed out that increased war traffic in express, mail, and passengers was resulting in constant heavy pay loads on the carrier's Latin-American divisions. During the pendency of this proceeding, according to the Board, Pan American earned excess profits of about \$4,356,000 on an average investment of approximately \$8,442,000. The Board stated, however, that it will not order the profits of \$4,356,000 recaptured.

Won't Order Recapture

Instead, as in the recent Panagra Mail Rate case decision, the Board expects the carrier to place certain restrictions on the use of such earnings found to be excessive, emphasizing that these excess funds should be used to serve and develop public air transportation and should not be devoted to the personal interest of the stockholders through the payment of dividends.

In establishing the new rate the Board reviewed the financial history of the carrier's Latin-American routes from January 1, 1929, to May 31, 1942, and stated that during that period, on an average net investment of \$7,192,202 Pan American had earned an average annual net of 20.75 percent before Federal taxes and 15.32 percent after taxes,

and paid out an average annual dividend of 7.82 percent. Beginning September 1, 1942, the Board found that the carrier had a recognized investment of \$14,204,895 and indicated that reasonable earnings on this amount under present war conditions will be \$1,420,490 per year after payment of Federal Taxes.

Trans-Pacific Pay Set

The Board's action on the carrier's trans-Pacific routes resulted in revision of the rate in effect on the North Pacific route between San Francisco, Calif., the British Crown Colony of Hong Kong, and Singapore, Straits Settlements; and in an initial determination of rates on the South Pacific route from San Francisco, Calif., to Auckland, New Zealand.

On the South Pacific route the Board set a new rate from July 1, 1940, the date on which the service was inaugurated, through October 31, 1940, at \$3.1112 per airplane mile flown in each direction on scheduled mail trips. The Board stated that for this 4-month period Pan American's average investment during operation was \$2,345,588 and that a return of 7 percent on this investment for such a limited period is adequate.

On the North Pacific route, from November 1, 1940, the date the Board instituted proceedings for review of mail rates on this service, through December 13, 1941, the Board set a revised rate of \$2.0021 per airplane mile flown in each direction on scheduled mail trips for both routes: From San Francisco to Hong Kong and Singapore and from San Francisco to Auckland, New Zealand. In establishing this rate the Board stated that it considered the carrier's North Pacific and South Pacific routes as one system.

ARMY—NAVY

(Continued from p. 177)

It is giving initial flight training to Navy reservists who will become combat pilots, and it is producing instructors and transport pilots for the Navy. For the Army, in addition to instructors and transport pilots, the C. A. A. is training glider pilots and liaison pilots. The latter perform special missions in light planes, such as spotting artillery fire and courier work. The increased quotas apply to all categories.

Board Studying Need for Panagra Terminal

The Civil Aeronautics Board has instituted a proceeding to determine whether the certificate of public convenience and necessity issued to Pan American-Grace Airways, Inc., should be amended to include a terminal point within the United States at Miami or Tampa, Fla.; New Orleans, La.; Brownsville or El Paso, Tex.; Los Angeles, Calif., or two or more of these points.

The Panagra company, whose ownership is equally divided between the W. R. Grace Co. and Pan American Airways, Inc., operates an air transportation service between Balboa, C. Z., and Buenos Aires, Argentina, via the West Coast of South America.

According to recitals in the Board's order, the Grace ownership claims that Panagra, because of the opposition of its 50 percent stockholder, Pan American Airways, is not authorized by its directors to make application to the Board for amendment of its certificate to provide for a terminal in the United States.

The Board reported that Grace interests also claim that at present Panagra is dependent on Pan American Airways for connecting services between the Canal Zone and the United States, and that such connecting service has been unsatisfactory. Stating that Pan American is the only air carrier authorized at the present time to engage in air transportation between the United States and South America, W. R. Grace expressed the opinion that additional service such as they propose would provide the competition necessary to the sound development of an air transportation system.

REGULATIONS

(Continued from p. 177)

In addition to changes in regulations, there have been several new administrative procedures adopted to speed up service and eliminate red tape. One was the appointment of flight examiners, who now number over 600. These are qualified, reliable men in the industry authorized to give tests for pilot certificates to the thousands of applicants created as a result of the C. A. A. pilot training program. Another was the use of multiple-choice tests on theoretical material, which are sent to Washington to be graded immediately by machine. The applicant is thus assured of a prompt and impartial decision.

A comprehensive shake-down of regulations must wait until the pressure of war tasks is lifted. Mr. Stanton pointed out, but the men who write and the men who enforce the rules are agreed that when civil flying comes back into its own, it must not be hampered by an overwhelming mass of regulatory verbiage. To promote the growth of flying, they are determined to cut down the rule book to an absolute minimum.

CIVIL AERONAUTICS BOARD OFFICIAL ACTIONS

Abstracts of Opinions, Orders, and Regulations

ORDERS

ORDER No. 1918..... *September 2, 1942*

Authorized temporary holding of certain interlocking relationships in the matter of the applications of Ralph M. Hognin and the Railway Express Agency, Inc.

ORDER No. 1919..... *September 2, 1942*

Approved interlocking relationships in the matter of the applications of Samuel F. Pryor, Jr., Robert G. Ferguson, Harold M. Bixby, Amos Hiatt, John O. Merckling, Pan American Airways, Inc., and Uraba, Medellin and Central Airways, Inc. (This order supersedes Orders, Serial Nos. 1221, 1254, and 1468.)

ORDER No. 1920..... *September 2, 1942*

Approved interlocking relationships in the matter of the application of Charles F. Adams and Pan American Airways, Inc.

ORDER No. 1921..... *September 5, 1942*

Granted permission to National Airlines, Inc., for expeditious use of the 36th Street Airport, Miami, Fla., so as to serve Miami, Fla.

ORDER No. 1922..... *September 5, 1942*

Granted permission to Pan American Airways, Inc., for expeditious use of Tanacross Airport to serve Tanacross, Alaska, and the airport at Burwash Landing, Y. T., Canada, to serve Burwash Landing, Y. T., Canada.

ORDER No. 1923..... *September 5, 1942*

Granted permission to Pan American Airways, Inc., for expeditious use of Macelo Airport to serve Macelo, Brazil.

ORDER No. 1924..... *September 9, 1942*

Suspended for 30 days, and thereafter until he shall have completed to the satisfaction of an authorized representative of the Administrator, the flight test required of applicants for private pilot certificates, private pilot certificate No. 13962-40 held by Robert Bower for altering his flight path by turning his plane at a low altitude with the resultant loss in flying speed terminating in a fatal accident to the passenger, and other violations of the Civil Air Regulations.

ORDER No. 1925..... *September 9, 1942*

Suspended for 90 days, private pilot certificate No. 104300 held by Robert Mollet for carrying a passenger after filing clearance for a solo flight, and other violations of the Civil Air Regulations.

ORDER No. 1926..... *September 9, 1942*

Granted American Airlines, Inc., permission to intervene in Docket No. 771

and broadened scope of said proceeding so as to determine whether American's certificates for its Mexico City route should be amended to authorize temporary transportation of persons, property, and mail between Laredo and San Antonio, Tex.; consolidated a portion of Docket 193 relating to service between Laredo and San Antonio with Docket 771; denied motion of Braniff Airways, Inc., to deny American's petition.

ORDER No. 1927..... *September 10, 1942*

Instituted proceeding and assigned hearing in the matter of an investigation to determine the need for temporary air transportation in the Caribbean Area.

ORDER No. 1928..... *September 10, 1942*

Instituted proceeding and assigned hearing in the matter of the alteration, amendment and modification of the certificate of public convenience and necessity of Pan American-Grace Airways, Inc., under section 401(h) of the Civil Aeronautics Act of 1938, as amended, to provide for a route terminal in the United States.

ORDER No. 1929..... *September 12, 1942*

Withheld from publication petition in the matter of the compensation for the transportation of mail by Pan American Airways, Inc., in that it contains secret information affecting national defense.

ORDER No. 1930..... *September 14, 1942*

Suspended for 90 days, student pilot certificate No. 336430 held by Albert D. Caire, for piloting an aircraft at an altitude of less than 1,000 feet over a congested city and other violations of the Civil Air Regulations.

ORDER No. 1931..... *September 14, 1942*

Suspended for 30 days private pilot certificate No. 66534, held by Gust Tasiopoulas for taking off in an aircraft without receiving proper clearance from the designated landing area clearance officer, and other violations of the Civil Air Regulations. (Opinion and Order—Docket No. SR-390.)

ORDER No. 1932..... *September 14, 1942*

Ordered that private pilot certificate No. 19034-40 held by Thomas R. Ferrell, and any certificate subsequently issued to him, be endorsed by an Instructor of the Civil Aeronautics Administration. (Opinion and Order—Docket No. SR-432.)

ORDER No. 1933..... *September 14, 1942*

Approved interlocking relationships in the matter of the application of W. J.

Scott, Harry H. Slaugh, J. N. Crowell, Catalina Air Transport, Santa Catalina Island Co., and Wilmington Transportation Co.

ORDER No. 1934..... *September 14, 1942*

Dismissed petition in the matter of Hans Groenhoff for reconsideration of the refusal of the Administrator to reinstate his pilot certificate and to issue a pilot identification card. (Opinion and Order—Docket No. SR-357.)

ORDER No. 1935..... *September 16, 1942*

Temporarily exempted Pan American Airways, Inc., from the provisions of sections 401 and 404 of the Civil Aeronautics Act of 1938, as amended, in so far as said provisions would otherwise require Pan American Airways, Inc., to render air transportation service to and from Camocim, Areia Branca, Aracaju, Caravellas, and Victoria, Brazil, as intermediate points on its route between Miami, Fla., and Buenos Aires, Argentina.

ORDER No. 1936..... *September 14, 1942*

Prescribed amendments to the uniform system of accounts for domestic air carriers.

ORDER No. 1937..... *September 17, 1942*

Suspended for 60 days, flight instructor rating held by Carlton M. Henson for performing acrobatic maneuver at an altitude of less than 1,500 feet over the ground and other violations of the Civil Air Regulations.

ORDER No. 1938..... *September 17, 1942*

Suspended for 90 days, student pilot certificate No. S-340508 held by Elmer G. Kile for failing to keep clear of another plane while at a higher altitude than said plane, such failure resulting in a collision, and other violations of the Civil Air Regulations.

ORDER No. 1939..... *September 17, 1942*

Dismissed, without prejudice, application of Arthur C. Lyde for approval of purchase and acquisition of Tri-State Aviation Corporation under section 408 of the Civil Aeronautics Act of 1938, as amended.

ORDER No. 1940..... *September 17, 1942*

Withheld from publication certain material in the matter of temporary foreign air transportation between the United States and Europe and for removal of certain restrictions relating to air transportation between the United States and Europe by Pan American Airways, Inc.

ORDER No. 1941----- September 15, 1942
Denied exemption and ordered Universal Air Freight Corporation to cease and desist from violation of certain sections of the Civil Aeronautics Act of 1938, as amended.

ORDER No. 1942----- September 18, 1942
Approved applications of W. A. Patterson and United Air Lines Transport Corporation for approval of the holding by W. A. Patterson of the position of Director of Air Cargo, Inc., while holding the positions of director and president of United Air Lines Transport Corporation.

ORDER No. 1943----- September 18, 1942
Approved applications of V. P. Conroy and Transcontinental & Western Air, Inc., for approval of the holding by V. P. Conroy of the position of director of Air Cargo, Inc., while holding the position of vice-president, Traffic and Sales, of Transcontinental & Western Air, Inc.

ORDER No. 1944----- September 18, 1942
Dismissed applications of T. B. Wilson and Transcontinental & Western Air, Inc., for approval of the holding by T. B. Wilson of the position of director of Air Cargo, Inc., while holding interlocking relationships approved by the Board by order No. 473, dated April 9, 1940.

ORDER No. 1945----- September 21, 1942
Suspended for 90 days student pilot certificate No. S-174881 held by Waldron F. Taylor for performing acrobatic maneuvers at an altitude of less than 500 feet above the ground and water in violation of the Civil Air Regulations.

ORDER No. 1946----- September 21, 1942
Revoked student pilot certificate No. S-35935 held by Wilson Thomason for carrying a passenger other than a certificated instructor, and other violations of the Civil Air Regulations.

ORDER No. 1947----- September 21, 1942
Suspended for 120 days private pilot certificate No. 26888-40 held by Ben Newton Walker for carrying a passenger with the dual controls operative when neither he nor the passenger were qualified for the operation and other violations of the Civil Air Regulations.

ORDER No. 1948----- September 23, 1942
Granted petition in the matter of the application of American Export Airlines, Inc., for approval by the Board of the control of American Export Airlines, Inc., by American Export Lines, Inc., for the purpose of reconsidering the conclusions and findings of fact contained in the Board's opinion and order (Serial No. 1870) and suspended said order pending the entry in the proceeding by the Board of its final order to be entered upon completion of the reargument authorized; denied petition in all other respects.

ORDER No. 1949----- September 17, 1942
Suspended for 4 months student pilot certificate No. S-248531 held by Robert

G. Soule for making a solo flight beyond a 50-mile radius from the operating base of his instructor, carrying a passenger other than a certificated instructor when the dual controls of the aircraft were operative and when neither he nor his passenger were qualified for such operation, and other violations of the Civil Air Regulations.

ORDER No. 1950----- September 17, 1942
Suspended for 60 days student pilot certificate No. S-243652 held by V. F. Crain for piloting an aircraft carrying a passenger and other violations of the Civil Air Regulations. (Opinion and order—Docket No. SR-407.)

ORDER No. 1951----- September 23, 1942
Suspended for 6 months private pilot certificate No. 63692-41 held by Joe R. Massey, Jr., for performing acrobatic maneuvers at an altitude of less than 1,500 feet and other violations of the Civil Air Regulations.

ORDER No. 1952----- September 23, 1942
Suspended for 6 months private pilot certificate No. 15414-40 held by Richard H. Harris for piloting an aircraft carrying a passenger with the dual controls fully functioning when neither he nor the passenger were qualified for such operation and other violations of the Civil Air Regulations.

ORDER No. 1953----- September 25, 1942
Authorized Western Air Lines, Inc., to temporarily suspend certain service on Route No. 52.

ORDER No. 1954----- September 25, 1942
Suspended for 6 months private pilot certificate No. 152974 held by Donald Randolph for piloting an aircraft at an altitude of less than 500 feet above the ground and other violations of the Civil Air Regulations.

ORDER No. 1955----- July 23, 1942
Granted in part application of Caribbean-Atlantic Airlines, Inc., for a certificate of public convenience and necessity under section 401 (d) (1) of the Civil Aeronautics Act of 1938, as amended, so as to authorize it to engage in air transportation with respect to persons, property, and mail between the terminal point San Juan, P. R., the intermediate point Ponce, P. R., and the terminal point Mayaguez, P. R.; and between the terminal point San Juan, P. R., the intermediate point Charlotte Amalie, St. Thomas, V. I., and the terminal point Christiansted, St. Croix, V. I.; denied application in all other respects; denied application of Aerovias Nacionales de Puerto Rico, Inc. (Opinion and order—Docket Nos. 277, 383.) (Approved by the President September 22, 1942.)

ORDER No. 1956----- September 28, 1942
Suspended for 60 days commercial pilot certificate No. 23715-40 held by Philip H. Browne, for piloting an aircraft carrying a passenger who occupied a control seat when the dual controls were fully functioning and when neither he nor said passenger were qualified for such operation and other violations of the Civil Air Regulations.

ORDER No. 1957----- September 30, 1942
Ordered that certain exhibits which were received in evidence in the matter of the petition of Northeast Airlines, Inc., for an order fixing and determining the fair and reasonable rate of compensation for the transportation of mail, the facilities used and useful therefor, and the service connected therewith, over route No. 27, be withheld from publication until the further order of the Board.

ORDER No. 1958----- September 30, 1942
Ordered that certain testimony be withheld from public disclosure and publication in the matter of the petition of American Airlines, Inc., for the determination of fair and reasonable rates of compensation for the transportation of mail, the facilities used and useful therefor, and the services connected therewith on routes Nos. 4 and 23 until the further order of the Board.

ORDER No. 1959----- September 30, 1942
Suspended for 90 days private pilot certificate No. 12911-40 held by Ralph D. Cohn for piloting an aircraft acrobatically over an airport and other violations of the Civil Air Regulations.

ORDER No. 1960----- September 30, 1942
Amended Order Serial No. 1574 so as to permit Elwyn West, holder of commercial pilot certificate No. 2830 with flight instructor rating, to apply for an instructor rating any time after Sept. 28, 1942.

ORDER No. 1961----- September 30, 1942
Dismissed petition of Jacques M. Mouries for a waiver of the citizenship requirements of the Civil Air Regulations and from the refusal of the Administrator of Civil Aeronautics to issue to him an identification card.

REGULATIONS

REGULATION No. 239. September 17, 1942
Effective September 17, 1942:

"Notwithstanding the provisions of section 60.973 (b) of the Civil Air Regulations, but subject to all other pertinent sections thereof, The Gold Fields American Development Company, Ltd., or New Goldfields of Venezuela, Ltd., may, within 45 days after the date of this special regulation, transport 45,000 blasting caps in an airplane of Venezuelan registry, and piloted by James Angel, from an airport at or near Baltimore, Maryland, to the territorial limits of the United States at a point on the route to Ciudad Bolivar, Venezuela, over a route to be specified by the Administrator and proceeding in accordance with any special directions or instructions which the Administrator may issue."

REGULATION No. 240. September 29, 1942
AMENDMENT NO. 2 OF SECTION 239.1 OF THE ECONOMIC REGULATIONS—CHARTER TRIPS AND SPECIAL SERVICE BY AIR CARRIERS HOLDING CERTIFICATES OF PUBLIC CONVENIENCE AND NECESSITY

Effective October 5, 1942, Paragraph (a) of section 239.1 of the Economic Regulations is hereby amended by striking out the words "the Military Director of Civil Aviation or his designee," and inserting in lieu thereof the words "the Commanding General, The Air Transport Command, or his designee."

REGULATION No. 241. September 29, 1942
Effective September 29, 1942:
Notwithstanding the provisions of section 60.973(b) of the Civil Air Regulations, but subject to all other pertinent sections thereof,

Dudley South, a contractor to the Rubber Reserve Company, may ship by air express, or carry as a part of his personal baggage, and Pan American Airways, Inc., its agents, officers, and employees may carry, not to exceed a total of 500 rounds of .38 calibre ammunition for an automatic pistol to Caracas, Venezuela, on any scheduled Pan American Airways' flight leaving Miami, Florida, on or before October 15, 1942.

Amendment 61-36—August 28, 1942
Effective August 28, 1942:

Part 26 of the Civil Air Regulations is amended as follows:

Add a new section 26.600 to read as follows:

"26.600 *Operation during physical deficiency.* A certificated air-traffic control-tower operator shall not serve as such during the period of any known physical deficiency which would render him unable to meet the physical requirements prescribed for the original issuance of his certificate: *Provided*, That if the deficiency is of a temporary nature, he may perform any duties not affected thereby when there is present and on duty another certificated and properly qualified air-traffic control-tower operator."

AMENDMENT 61-39—September 16, 1942
Effective September 16, 1942:

Part 61 of the Civil Air Regulations is amended as follows:

1. Strike sections 61.518 through 61.5186 (g) and insert in lieu thereof the following:

"61.518 *Flight time limitations.* The following rules prescribe the flight time limitations for all pilots in scheduled air transportation:

(a) A pilot may be scheduled to fly 8 hours or less during any 24 consecutive hours, without a rest period during such 8 hours. If such pilot be scheduled to fly in excess of 8 hours during any 24 consecutive hours, he shall be given an intervening rest period at or before the termination of 8 scheduled hours of flight duty. Such rest period shall equal at least twice the number of hours flown since the last preceding rest period and in no case shall such rest period be less than 8 hours. During such rest period, the pilot shall be relieved of all duty with the air carrier.

(b) When a pilot has flown in scheduled air transportation service in excess of 8 hours during any 24 consecutive hours, he shall receive 24 hours of rest before being assigned any duty with the air carrier. Time spent in dead-head transportation to duty assignment shall not be considered part of such rest period.

(c) A pilot shall not fly in excess of 30 hours during any 7 consecutive days. Relief from all duty for not less than 24 consecutive hours shall be provided for and given to such pilot at least once during any 7 consecutive days.

(d) A pilot shall not fly in scheduled air transportation service as a member of the crew more than 100 hours in any one month: *Provided*, That the Administrator is authorized, during the present war and until 6 months after the termination thereof, to permit the maximum of 100 hours to be exceeded to the extent necessary to complete a particular flight for military purposes.

(e) A pilot shall not fly in scheduled air transportation service as a member of the crew more than 1,000 hours in any one calendar year: *Provided*, That this limitation shall not be effective during the present war and until 6 months after the termination thereof, and that during this period the maximum flying hours permitted in any one calendar year shall be controlled by the provisions of subsection (d) of this section.

(f) The foregoing flight time limitations shall not be applicable when a pilot is qualifying on a regular route, or alternate route, over which such pilot is not qualified.

(g) A pilot shall not do other commercial flying while employed by an air carrier when such flying, in addition to that in scheduled air transportation service, will exceed any flight time limitations specified herein."

2. Strike section 61.524 and insert in lieu thereof the following:

"61.524 (Unassigned)."

ACCIDENTS

(Continued from p. 179)

Taxying Military Pilot Causes Airline Accident

A ground collision accident which occurred at the Municipal Airport, Abilene, Tex., on January 21, 1942, resulted in the destruction of two Aeronca airplanes, model 65 TL, and major damage to Aeronca model 65 TAL. None of them was occupied. A Douglas DC-3 airplane, owned and operated by American Airlines, Inc., also received major damage. None of the 21 passengers in the Douglas or its crew of 3 received any injuries. The crew consisted of Capt. Henry T. Myers and First Officer Victor E. James, both of whom were properly certificated and appropriately rated, and Stewardess Dorothy Murphy.

The Douglas was making the flight designated by American Airlines as trip No. 23/4-1, which originated at New York with Los Angeles as its destination. Intermediate stops were scheduled at various points, including Abilene, Tex.

Trip 1 departed from Fort Worth on schedule and proceeded without incident until it reached Abilene. As a normal landing was being completed and while the plane was rolling west on the east-west runway at about 50 miles per hour, its landing lights picked out a military aircraft directly in its path and only 600 or 700 feet away. The military plane was taxiing south to north across the runway, and its camouflaging made it scarcely discernible. Captain Myers slowed down as quickly as possible by use of his brakes, but as this would not have been sufficient to prevent a collision, he unlocked his tail wheel and swerved to the left. This swerve carried him clear of the plane on the runway, but also started a groundloop to the left which he was unable to stop until the Douglas had collided with the three unoccupied Aeroncas, two of which were parked in front of the hangar and the third in the hangar door.

Subsequent investigation disclosed that the military plane on the runway was one of nine which had been refueling near the administration building just south of the east-west runway at the time loud speakers announced the approach and intended landing of trip 1. The airport manager had intended that the pilots of these nine planes cross the east-west runway at a runway intersection farther west and then return east to a designated parking space north of the east-west runway. However, he did not issue specific instructions as to how these planes should proceed to the parking area.

Probable cause.—Action of the pilot of the military plane in taxiing across the path of the air carrier aircraft making a night landing.

Contributing factors.—(1) Failure of station manager for the air carrier involved to take precautions to have the runway kept clear pending arrival of the scheduled flight.

(2) Failure of the city airport manager to take proper precautions in handling the Army aircraft on the field at a time when an airline trip was scheduled to arrive.

Loose Control Stick Cause of Accident

An accident which occurred at the James Clements Airport, Bay City, Mich., on November 30, 1941, resulted in serious injuries to Pilot Robert Francis Bergen and to his passenger, Robert E. Charlebois. Bergen held a private pilot certificate and was rated to fly single-engine land airplanes of 80 h. p. or less. He had accumulated approximately 66 hours of flying time. Charlebois held no type of pilot certificate. The aircraft, a Piper J3C-65, owned by Hoffman Flying Service, Bay City, was extensively damaged.

Bergen and Charlebois took off from the airport for a local pleasure flight with the passenger in the front and the pilot in the rear seat. The dual control stick had been removed. They circled the field two or three times, and Bergen subsequently stated that during this time he had noticed that the control stick was a little loose. He approached for a landing toward the northeast on the northeast-southwest runway, throttling the engine at an altitude of 600 feet. While coming out of his last turn, and as he was easing the stick forward, it came off its stub. The pilot made an unsuccessful attempt to put the stick back on, and then asked the passenger to pull back on the control stick stub in front to help control the plane. This did little good, and just before the plane crashed power was applied in a final attempt to raise the nose. However, the airplane dived to the ground and bounced violently. It came to rest on its nose and the bottom of the fuselage with both wing tips resting on the ground.

The rear control stick safety bolt was reported to have been in place with the nut on tight at the time the line inspection was made the day of the accident and later when the front stick was installed for a dual flight. No one could state whether the nut had been safetied. The bolt could not be found after the accident, and no one seemed to know when or why it had been removed. The pilot who flew the plane prior to Bergen's flight stated that the aircraft seemed to be normal in all respects. The pilot stated that after the stick came off he trimmed the stabilizer for a nose-up attitude. However, investigation of the wreckage revealed that the stabilizer was set in neutral position. Weather conditions were good and had no bearing on the accident.

Probable cause.—Disengagement of pilot's control stick during landing approach.

Contributing factor.—Failure of pilot to check controls before flight.

Status Of Air Regulations

As of October 1, 1942

HOW TO OBTAIN PARTS, AMENDMENTS, AND MANUALS

THOSE PARTS AND MANUALS ON WHICH A PRICE IS LISTED IN THE TABULATION WHICH FOLLOWS ARE ON SALE AT THE GOVERNMENT PRINTING OFFICE (SHOWN AS G. P. O. IN TABLE), AND ARE NOT AVAILABLE FOR FREE DISTRIBUTION FROM THE C. A. A.

The Government Printing Office is the official sales agency for all government publications and is separate and distinct from the C. A. A. and the Department of Commerce. The rules of the Superintendent of Documents require that remittances be made in advance of shipment of publications, either by coupons, sold in sets of 20 for \$1 and good until used, or by check or money order payable to the Superintendent of Documents, Government Printing Office. Currency is sent at sender's risk. Postage stamps, foreign money, and smooth coins are not acceptable. A discount of 25 percent is allowable to book dealers and quantity purchasers of 100 or more publications, on condition that the purchasers will adhere to the public sales price set by the Superintendent of Documents and that publications shall not be overprinted with any advertising matter.

Eventually, all parts and manuals will be placed on sale; meanwhile, those not yet on sale (carrying remark, "Order from C. A. A. only") may be obtained without charge from the C. A. A. upon demonstration of valid interest on the applicant's part.

The following tabulation carries in the right-hand column the numbers of all effective amendments to each part and manual issued subsequent to its publication. Parts and manuals obtained from the C. A. A. will include all effective amendments, but amendments for parts and manuals purchased from G. P. O. must be requested separately from the C. A. A. When requesting amendments from the C. A. A., please be sure to state part numbers for which they are desired.

ALL AMENDMENTS TO THE REGULATIONS, AND NOTICE OF NEW PARTS AND MANUALS, ARE PRINTED IN THE CIVIL AERONAUTICS JOURNAL AS RELEASED.

Bound volumes of the complete Civil Air Regulations are no longer available. Parts and amendments are punched for filing in standard three-ring binders.

For your guidance we have listed the parts and manuals applicable to the various airmen certificates issued.

Pilots:

Parts 01, 20, 60, 501, and manual 60.
Airline Transport Pilots:
Parts 01, 04, 21, 27, 40, 60, 61, 98, 501, and manuals 04 and 60.
Lighter-Than-Air Pilots:
Parts 01, 22, 60, 501, and manual 60.
Aircraft Mechanics:
Parts 01, 04, 15, 18, 24, 501, section 60, 32, and manuals 04, 15, and 18.
Aircraft Engine Mechanics:
Parts 01, 04, 13, 14, 18, 24, 501 and manuals 04, 14, and 18.
Parachute Riggers:
Parts 15, 24, and manual 15.
Air-Traffic Control-Tower Operators:
Parts 26, 60, and manual 60.
Aircraft Dispatchers:
Parts 27, 40, 60, 61, and manual 60.
Ground Instructors (rating in Civil Air Regulations):
Parts 01, 20, 51, 60, 501, and manual 60.

PARTS CANCELED AND UNASSIGNED

Canceled parts 00 and 03 now incorporated in part 501; canceled part 23 now incorporated in part 51; and canceled part 25 now incorporated in part 24. Parts 90-96, inclusive, canceled. All other part numbers not shown are unassigned.

Civil Air Regulations

Aircraft

01	AIRWORTHINESS CERTIFICATES.....	11-1-41	On sale at G. P. O.....	\$0.05	01-11, 01-2, 01-3, Reg. No. 223.
02	TYPE AND PRODUCTION CERTIFICATES.....	3-1-41	On sale at G. P. O.....	.05	
04	AIRPLANE AIRWORTHINESS.....	8-15-42	On sale at G. P. O.....	.15	
13	AIRCRAFT ENGINE AIRWORTHINESS.....	8-1-41	On sale at G. P. O.....	.05	
14	AIRCRAFT PROPELLER AIRWORTHINESS.....	7-15-42	On sale at G. P. O.....	.05	
15	AIRCRAFT EQUIPMENT AIRWORTHINESS.....	11-15-40	In stock; order from C. A. A. only.....		15-11, 15-2.
16	AIRCRAFT RADIO EQUIPMENT AIRWORTHINESS.....	2-15-41	On sale at G. P. O.....	.05	
18	MAINTENANCE, REPAIR, AND ALTERATION OF CERTIFICATED AIRCRAFT AND OF AIRCRAFT ENGINES, PROPELLERS, AND INSTRUMENTS.....	6-1-41	Out of stock; on sale soon at G. P. O.....		

Airmen

20	PILOT CERTIFICATES.....	9-1-42	On sale at G. P. O.....	\$0.10	
21	AIRLINE TRANSPORT PILOT RATING.....	11-15-40	In stock; order from C. A. A. only.....		87, 101, 115, 21-4 through 21-9.
22	LIGHTER-THAN-AIR PILOT CERTIFICATES.....	9-15-41	On sale at G. P. O.....	.10	22-1 through 22-5.
24	MECHANIC CERTIFICATES.....	5-1-40	On sale at G. P. O.....	.05	44, 73, 75, 87, 109, 24-7, 24-8, 24-9, through 24-11.
26	AIR-TRAFFIC CONTROL-TOWER OPERATOR CERTIFICATES.....	7-1-42	On sale at G. P. O.....	.05	26-1.
27	AIRCRAFT DISPATCHER CERTIFICATES.....	7-15-40	On sale at G. P. O.....	.05	74, 75, 87, 27-5, 27-6 ¹ , 27-7, through 27-9.
29	PHYSICAL STANDARDS FOR PILOTS.....	6-1-42	On sale at G. P. O.....	.05	

Air Carriers

40	AIR CARRIER OPERATING CERTIFICATION.....	11-1-40	On sale at G. P. O.....	\$0.05	85, 89, 102, 120, 133, 40-6, through 40-10.
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Air Agencies

50	FLYING SCHOOL RATING.....	11-1-40	On sale at G. P. O.....	\$0.05	87, 113, 50-3, Reg. No. 216. ¹
51	GROUND INSTRUCTOR RATING.....	7-1-42	On sale at G. P. O.....	.05	
52	REPAIR STATION RATING.....	5-1-40	On sale at G. P. O.....	.05	75, 84, 87.
53	MECHANIC SCHOOL RATING.....	8-1-42	On sale at G. P. O.....	.05	

Air Navigation

60	AIR-TRAFFIC RULES.....	7-15-42	On sale at G. P. O.....	\$0.10	
61	SCHEDULED AIR-CARRIER RULES.....	1-1-41	On sale at G. P. O.....	.05	91, 94, 97, 102, 115, 120, 122, 129, 130, 132, 134, 61-17 through 61-32, 61-34, through 61-39.
66	FOREIGN AIR-CARRIER REGULATIONS.....	1-15-42	On sale at G. P. O.....	.05	

Miscellaneous

98	DEFINITIONS.....	11-15-40	In stock; order from C. A. A. only.....		98-1.
99	MODE OF CITATION OF REGULATIONS.....	11-15-40	In stock; order from C. A. A. only.....		

¹ Order No. 1818 suspends effective date until 11-1-48.

² No copies available. (Requires identification cards.) Consult C. A. A. inspector for specific provisions of this amendment.

³ No copies available. (Waiver of requirements.) Consult C. A. A. inspector for specific provisions of this amendment.

(Status of Air Regulations continued on following page)

Status of Air Regulations

(Continued from preceding page)

Regulations of the Administrator

PART NO.	TITLE	DATE	REMARKS	PRICE	EFFECTIVE AMENDMENTS
501	AIRCRAFT REGISTRATION CERTIFICATES.....	11-1-41	In stock; order from C. A. A. only.....		
510	GENERAL REGULATIONS, WASHINGTON NATIONAL AIRPORT.	9-26-41	In stock; order from C. A. A. only.....		
511	GENERAL AERONAUTICAL RULES FOR THE WASHINGTON NATIONAL AIRPORT.	9-26-41	In stock; order from C. A. A. only.....		
525	NOTICE OF CONSTRUCTION OR ALTERATION OF STRUCTURES ON OR NEAR CIVIL AIRWAYS.	11-1-41	In stock; order from C. A. A. only.....		1.
531	SEIZURE OF AIRCRAFT.....	12-9-41	In stock; order from C. A. A. only.....		
600	DESIGNATION OF CIVIL AIRWAYS.....	3-1-42	Not published ⁴		1 through 7.
601	DESIGNATION OF AIRWAY TRAFFIC CONTROL AREAS, ETC.	1-15-42	Not published ⁴		1 through 14.

⁴ See Air Navigation Radio Aids.

Civil Aeronautics Manuals

04	AIRPLANE AIRWORTHINESS.....	2-1-41	On sale at G. P. O.	\$0.50	Release 50, 97, ⁵ 105, ⁶ 117. ⁵
14	AIRCRAFT PROPELLER AIRWORTHINESS.....	12-1-38	In stock; order from C. A. A. only.....		
15	AIRCRAFT EQUIPMENT AIRWORTHINESS.....	7-1-38	In stock; order from C. A. A. only.....		
16	AIRCRAFT RADIO EQUIPMENT AIRWORTHINESS.....	2-13-42	In stock; order from C. A. A. only.....		Release 62.
18	MAINTENANCE, REPAIR, AND ALTERATION OF CERTIFICATED AIRCRAFT AND OF AIRCRAFT ENGINES, PROPELLERS, AND INSTRUMENTS.	6-1-41	On sale at G. P. O.50	
60	FLYING SCHOOL RATING.....	12-40	In stock; order from C. A. A. only.....		Release 77.
62	REPAIR STATION RATING.....	2-41	In stock; order from C. A. A. only.....		
63	MECHANIC SCHOOL RATING.....	6-40	In stock; order from C. A. A. only.....		
60, part 1	SUMMARY OF FLIGHT RULES.....	12-1-40	In stock; order from C. A. A. only.....		
60, part 2	AIRPORT TRAFFIC CONTROL.....	10-1-40	In stock; order from C. A. A. only.....		
60, part 3	AIRWAY TRAFFIC CONTROL.....	12-1-40	Out of stock; to be available from C. A. A. only.....		

⁵ Only pertinent pages furnished.

⁶ Out of stock.

RESEARCH

(Continued from p. 177)

quency equipment and C. A. A. radio engineers claim that "for the first time in the history of aeronautical communications it has become possible to apply advance technical planning in the allocation of radio frequencies." The report points out that only since the aviation services were given an exclusive band of frequencies has it been possible to apply such advance planning.

Static Investigated

From the consideration of "precipitation static" interference the band between 60 and 70 megacycles is the most satisfactory frequency range so far tested for aircraft communications, according to Report No. 29, which is entitled "Report on a Laboratory Investigation of 'Precipitation Static' Interference as Encountered on Aircraft."

The report on static presents the findings of a 1-year research conducted at Purdue University by the Technical Development Division of the Administration. It states further that investigations have proven, or substantiated the fact that both corona and charged particle interferences originate as current pulses.

Copies of both reports are obtainable from the C. A. A. upon demonstration of a bona fide technical interest in their subject matter.

Machine Saves Time, Money

A machine developed at the Willow Run bomber plant, according to the Ford Motor Co., performs 10 boring operations simultaneously, cutting a day's work to 2 hours, and saving \$1,000 per plane.

New Aeronautical Publications

Among recent Government publications dealing with the subject of aeronautics are the following:

CIVIL AIR REGULATIONS: Civil Aeronautics Board; 1942.

Part 04, Airplane Airworthiness: 53 pages illustrated. As amended to August 15, 1942. Price 15 cents.

Part 14, Aircraft Propeller Airworthiness; 4 pages. As amended to July 15, 1942. Price 5 cents.

Part 20, Pilot Certificates; 10 pages. Effective September 1, 1942. Price 10 cents. Classification number C 31.209.

Part 51, Ground Instructor Rating: 2 pages. Effective July 1, 1942, as amended. Price 5 cents. Classification number C 31.209.

Part 60, Air Traffic Rules; 27 pages. As amended to July 15, 1942. Price 10 cents. Classification number C 31.209.

ARMY TECHNICAL MANUAL 1-208; Air Navigation Tables; June 5, 1942; 221 pages. Price 50 cents. Classification number W 1.35: 1-208.

ARMY TECHNICAL MANUAL 1-210; Elementary Flying; January 9, 1942; 145 pages illustrated. Price 25 cents. Classification number W 1.35: 1-210.

ARMY TECHNICAL MANUAL 1-424; Aircraft Hardware and Materials; June 11, 1942; 80 pages illustrated. Price 15 cents. Classification number W 1.35: 1-424.

ARMY TECHNICAL MANUAL 1-470; Aircraft Radio Shop Practice; May 1, 1942; 124 pages illustrated. Price 20 cents. Classification number W 1.35: 1-470.

ARMY TECHNICAL MANUAL 3-240; Meteorology; March 7, 1942; 51 pages illustrated; Price 10 cents. Classification number W 1.35: 3-240 (Supersedes TM 3-240, Aug. 6, 1940).

ARMY TECHNICAL MANUAL 1-445; Instrument Flying Training; June 18, 1942; Price 20 cents. Classification number W 1.35: 1-445. (Supersedes TM 1-445, September 7, 1940).

NAVAL AFFAIRS COMMITTEE. HOUSE; Naval Aviators; Hearing on H. R. 7324 (No. 257)

Commerce Secretary Voices New Thought

One of the newer thoughts on aviation education was expressed recently when Secretary of Commerce Jesse Jones, in a radio address, said "We are accustomed to thinking of ourselves as creatures living on top of the ground. We should realize that we are living at the bottom of an ocean of air, readily navigable in all directions, at tremendous speeds."

The Secretary explained to parents and school authorities the full meaning to our Nation's future of the aviation education program being sponsored by the C. A. A. and the United States Office of Education.

to amend act approved August 27, 1940, entitled "An act increasing number of naval aviators in the line of the regular Navy and Marine Corps, and for other Purposes". 1942. Page 3319. Price 5 cents. Classification number Y 4.N 22/1a: 941-42.

NAVAL AFFAIRS COMMITTEE. HOUSE; Naval Aviation Cadets; Hearing on H. R. 7364 (No. 258) to repeal certain laws and to amend other laws relating to naval aviation cadets, and to provide for aviation cadets in the Naval Reserve and Marine Corps Reserve, and for other purposes. 1942. Page 3321. Price 5 cents. Classification number Y 4.N 22/1a: 941-42.

When ordering these publications, send remittance by postal money order, express order, coupons, or check to the Superintendent of Documents, Government Printing Office, Washington, D. C. Always give title, issuing office, or classification number when listed.

CIVIL AERONAUTICS JOURNAL

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